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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/590,854

08/25/2006

Tadayuki Isaji

0171-1300PUS1

4134

2292 7590 02/02/2009
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EXAMINER

PAK, HANNAH J

ART UNIT

PAPER NUMBER

1796

NOTIFICATION DATE

DELIVERY MODE

02/02/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No. 10/590,854	Applicant(s) ISAJI ET AL.	
	Examiner Hannah Pak	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 June 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>08/25/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jonas et al. (US 2002/0173579) in view of Admitted Prior Art (Page 6, Paragraph 10 of the specification) or Wessling et al. (US 5,567,355).

Jonas et al. disclose a process for the preparation of dispersions or solutions suitable for the production of rechargeable batteries, light-emitting diodes, electrochromic windows, cathode ray tubes, and antistatic coatings (Paragraphs 1, 3, and 82). The process involves 1) preparing an aqueous suspension containing polythiophene+An-Ion complex (polythiophene+ is a polymer), which is subjected to both anion and cation exchangers (method of deionization), and membrane method, such as ultrafiltration, 2) adding an organic solvent, such as N-methylpyrrolidone, alcohols, and ethers, to the aqueous suspension, 3) at least some of the water is removed from the resultant mixture, and 3) the mixture can be further diluted with other types of organic solvents, including aliphatic alcohols, e.g. n-propanol or isopropanol, and aliphatic ketones (see Paragraphs 34-50, 74, 78, 84 and 91).

Jonas et al. do not specifically indicate their polythiophene polymers are intrinsically conductive polymer.

However, the applicants admit on page 6, paragraph 10 of the specification that samples of intrinsically conductive polymers, polythiophene (typically, 3,4 ethylenedioxythiophene), polyaniline, a mixture thereof and a copolymer thereof, in the form of aqueous colloidal dispersion are not only commercially available, but desirable as well.

Alternatively, Wessling et al. teach intrinsically conductive polymers, such as polyaniline or polythiophene, are well known in the art to be very good conductor of electricity (Col. 1, lines 10-41).

Therefore, it would have been obvious to one of ordinary skill in the art to use the widely known and advantageous intrinsically conductive polymers, which is inclusive of the polythiophene polymer taught by Jonas et al., in the process for the preparation of dispersions or solutions.

Regarding claims 4, 5 and 10, Jonas et al. do not mention the specific solid and water contents. However, Jonas et al. teach the water content to be preferably 0-5% by weight (Paragraph 80), which overlaps with the amount recited in claims 5 and 10 (below 1%). Jonas et al. also teach 0.01% to about 20% by weight of solids content (Paragraph 81), which overlaps with the amount recited in claim 4 (0.05-10 wt. %). Therefore, the subject matter as a whole would have been obvious to one having ordinary skill in the art at the invention was made, since it has been held that choosing the overlapping portion of the ranges taught by Jonas et al. and the ranges claimed by the applicant, has been held to be a *prima facie* case of obviousness, see *MPEP* § 2144.05. It would have been also obvious to have the optimum or workable amounts of

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solid and water content to obtain the dispersion or a solution with desired properties suitable for various productions, see *MPEP* § 2144.05, *IIB*.

Conclusion

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hannah Pak whose telephone number is (571) 270-5456. The examiner can normally be reached on Monday - alternating Fridays (7:30 am - 5 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Hannah Pak

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Examiner
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/HP/

/Vasu Jagannathan/
Supervisory Patent Examiner, Art Unit 1796